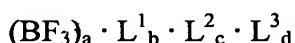


**Claim Amendments**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims**

Claim 1 (Currently Amended): A process for preparing polyisobutene having a content of terminal vinylidene groups of at least 75 mol %, comprising:  
polymerizing isobutene or isobutenic hydrocarbon mixtures in the liquid phase in the presence of a boron trifluoride complex catalyst of the composition



**wherein**

- $L^1$  is water, a primary C<sub>1</sub>-C<sub>5</sub>-alkanol and/or a secondary C<sub>3</sub>-C<sub>5</sub>-alkanol,
- $L^2$  is at least one aldehyde and/or one ketone,
- $L^3$  is an ether having at least 5 carbon atoms, a secondary alkanol having at least 6 carbon atoms, a primary alkanol having at least 6 carbon atoms and/or a tertiary alkanol, **and wherein**

- the b:a ratio is in the range from 0.9 to 3.0,
- the c:a ratio is in the range from 0.01 to less than 0.5,
- the d:a ratio is in the range from 0 to 1.0.

Claim 2 (Previously Presented): The process as claimed in claim 1, wherein  $L^1$  is selected from the group consisting of water, methanol, ethanol, 2-propanol, 1-propanol and mixtures thereof.

Claim 3 (Currently Amended): The process as claimed in claim 1, wherein L<sup>2</sup> is selected from the group consisting of formaldehyde, acetaldehyde, propionaldehyde, n-butyraldehyde, isobutyraldehyde, acetone, methyl ethyl ketone, diethyl ketone and mixtures thereof.

Claim 4 (Previously Presented): The process as claimed in claim 1, wherein the d:a ratio is in the range from 0.1 to 1.

Claim 5 (Currently Amended): The process as claimed in claim 4, wherein L<sup>3</sup> is selected from the group consisting of methyl tert-butyl ether, di-n-butyl ether, di-n-hexyl ether, dioctyl ether and mixtures thereof.

Claim 6 (Previously Presented): The process as claimed in claim 4, wherein L<sup>3</sup> is selected from primary alcohols having β-branching.

Claim 7 (Previously Presented): The process as claimed in claim 6, wherein L<sup>3</sup> is selected from the group consisting of 2-ethylhexanol, 2-propylheptanol, the oxo alcohols of dimeric, trimeric and tetrameric propylene, dimeric butene, trimeric butene and mixtures thereof.

Claim 8 (Previously Presented): The process as claimed in claim 4, wherein L<sup>3</sup> is tert-butanol.

Claim 9 (Currently Amended): The process as claimed in claim 4, wherein L<sup>3</sup> is selected from the group consisting of n-hexanol and n-octanol.

Claim 10 (Currently Amended): The process as claimed in claim 1, wherein the for preparing polyisobutene having has a number-average molecular weight  $M_n$  of ranging from 500 to 2500 dalton.

Claim 11 (New) The process as claimed in claim 1, wherein from 0.5 to 10 mmol of complexed boron trifluoride catalyst, calculated as  $BF_3$ , reacts with olefin monomers, on a per mole basis, in the isobutenic hydrocarbon mixture.

Claim 12 (New) The process as claimed in claim 1, wherein the polymerization reaction is conducted at a temperature within the range of 0 to -40° C at a pressure of 0.5 to 20 bar (absolute).

Claim 13 (New) The process as claimed in claim 1, wherein the polymerization reaction is conducted at a temperature within the range of 0 to -30° C.